Abstract

The invention provides a multifunctional suture needle that may be used to draw a suture through tissue surrounding a wound while simultaneously delivering a bioactive fluid through the needle tip. The suture needle possesses an internal cavity capable of containing a fluid, and a fine aperture adjacent to the point of the needle through which the fluid may egress. The fluid may be driven from the needle through the needle tip with a compressed gas that is sealed within the cavity adjacent to the fluid. Alternatively a fluid conducting suture may be employed to deliver fluid through the internal passage of the suture needle and out the aperture adjacent to the tip of the needle. The rate at which the fluid is emitted from the suture needle may be controlled by carefully selecting the fluid viscosity, design of the needle or suture passages, and pressure applied to the fluid.